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# TRANSMITTAL FORM

*(to be used for all correspondence after initial filing)*

| | |
|---|---|
| Application Number | 09/579,596 |
| Filing Date | May 26, 2000 |
| First Named Inventor | Linder |
| Group Art Unit | 2734 |
| Examiner Name | Not Assigned |
| Attorney Docket No. | 535352000400 |

Total Number Of Pages In This Submission: *

## ENCLOSURES (check all that apply)

- [ ] Fee Transmittal Form
  - [ ] Fee Attached
- [ ] Amendment / Reply
  - [ ] After Final
  - [ ] Affidavits/declarations
- [ ] Extension of Time Request
- [ ] Express Abandonment Request
- [ ] Information Disclosure Statement
- [ ] Certified Copy of Priority Document(s)
- [ ] Response to Missing Parts/ Incomplete Application
  - [ ] Response to Missing Parts under 37 CFR 1.52 or 1.53
- [ ] Assignment Papers *(for an Application)*
- [ ] Drawing(s)
- [ ] Licensing-related Papers
- [ ] Petition
- [ ] Petition to Convert to a Provisional Application
- [x] Power of Attorney, Revocation Change of Correspondence Address
- [x] Statement Under 37 CFR 3.73(b)
- [ ] Request for Refund
- [ ] CD, Number of CD(s)_____
- [ ] After Allowance Communication to Group
- [ ] Appeal Communication to Board of Appeals and Interferences
- [ ] Appeal Communication to Group *(Appeal Notice, Brief, Reply Brief)*
- [ ] Proprietary Information
- [ ] Status Letter
- [ ] Other Enclosure(s) *(please identify below):*



Remarks

## SIGNATURE OF APPLICANT, ATTORNEY OR AGENT

| | |
|---|---|
| Firm or Individual Name | David T. Yang<br>Morrison & Foerster LLP<br>555 West Fifth Street, Suite 3500<br>Los Angeles, CA 90013 |
| Signature | |
| Date | July 23, 2002 |

### CERTIFICATE OF MAILING BY "FIRST CLASS MAIL"

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231, on July 23, 2002.

David T. Yang

Burden Hours Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Box Patent Application, Washington, DC 20231.

la-588263

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

**REVOCATION OF PRIOR POWER OF ATTORNEY AND POWER OF ATTORNEY AND PROSECUTION BY ASSIGNEE UNDER 37 C.F.R. § 3.71**



Assistant Commissioner for Patents
Washington, D.C. 20231

Dear Sir:

TelASIC Communications, Inc., the assignee of the entire right, title and interest in the patents and patent applications listed on the attached U.S. Schedule A, hereby revoke all Powers of Attorney previously granted relating to these granted patents and pending applications and appoint as its attorneys or agents, with full power of substitution, association, and revocation, to prosecute these applications and to transact all business in the United States Patent and Trademark Office connected herewith:

Lisa A. Amii (Reg No. 48,199)
Mehran Arjomand (Reg No. 48,231)
Erwin J. Basinski (Reg No. 34,773)
Richard R. Batt (Reg No. 43,485)
Jonathan Bockman (Reg No. 45,640)
Barry E. Bretschneider (Reg No. 28,055)
Tyler S. Brown (Reg No. 36,465)
A. Randall Camacho (Reg No. 46,595)
Robert K. Cerpa (Reg No. 39,933)
Alex Chartove (Reg No. 31,942)
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Matthew M. D'Amore (Reg No. 42,457)
Peter Davis (Reg No. 36,119)
Karen B. Dow (Reg No. 29,684)
Richard R. Eckman (Reg No. 42,504)
Elisabeth M. Evertsz (Reg No. 50,304)
David L. Fehrman (Reg No. 28,600)
Thomas George (Reg No. 45,740)
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Bruce D. Grant (Reg No. 47,608)
Douglas G. Hodder (Reg No. 41,840)
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Madeline I. Johnston (Reg No. 36,174)
Ararat Kapouytian (Reg No. 40,044)
Cameron A. King (Reg No. 41,897)
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Eric Witt (Reg No. 44,408)
David T. Yang (Reg No. 44,415)
George C. Yu (Reg No. 44,418)
Jie Zhou (Reg No. 52,395)
Kenneth R. Glick (Reg No. 28,612)
Johney U. Han (Reg No. 45,565)
Alan S. Hodes (Reg No. 38,185)
Arthur S. Hsieh (Reg No. 48,247)
Wayne Jaeschke, Jr. (Reg No. 38,503)
Parisa Jorjani (Reg No. 46,813)
Richard C. Kim (Reg No. 40,046)
Lawrence B. Kong (Reg No. P49, 043)
Glenn Kubota (Reg No. 44,197
Hugh H. Matsubayashi (Reg No. 43,779)
Robert S. McArthur (Reg No. 45,674)
Philip A. Morin (Reg No. 45,926)
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Phillip Reilly (Reg No. 41,415)
Robert E. Scheid (Reg. No. 42,126)
Terri Shieh-Newton (Reg No. 47,081)
Kevin R. Spivak (Reg No. 43,148)
Thomas L. Treffert (Reg No. P48,279)
Michael R. Ward (Reg No. 38,651)
Todd W. Wight (Reg No. 45,218)
Frank Wu (Reg No. 41,386)
Peter J. Yim (Reg No. 44,417)
Karen R. Zachow (Reg No. 46,332)

all of Morrison & Foerster LLP, 555 West Fifth Street, Suite 3500, Los Angeles, California 90013-1024, telephone: (213) 892-5200, said appointment to be to the exclusion of the inventors and their attorneys in accordance with the provisions of 37 C.F.R. § 3.71 provided that if any one of said attorneys or agents ceases being affiliated with the law firm of Morrison & Foerster LLP as partner, employee or of counsel, such attorney's or agent's appointment as attorney or agent and all powers derived therefrom shall terminate on the date such attorney or agent ceases being so affiliated.

Please direct all communications relative to this application to:

David T. Yang
Morrison & Foerster LLP
555 West Fifth Street
Suite 3500
Los Angeles, California 90013-1024

Please direct all telephone communications to David T. Yang at (213) 892-5587.

TelASIC Communications, Inc.
a Delaware corporation

Dated: _____

Name: Tony Giraudo
Title: Chief Executive Officer
Address: 1940 E. Mariposa Avenue
El Segundo, CA 90245

U.S. SCHEDULE A



| Country | Title | Filing Date | Serial / Application No. | Issue Date | Patent No. |
|---|---|---|---|---|---|
| UNITED STATES | WIDEBAND FAST-HOPPING RECEIVER FRONT-END AND MIXING METHOD | 09/18/2000 | 09/664,298 | | |
| UNITED STATES | HIGH-SPEED DIGITAL DATA COMMUNICATION SYSTEM | 08/25/1987 | 07/089,281 | 07/10/1990 | 4,941,153 |
| UNITED STATES | EFFICIENT HIGH SPEED N-WORD COMPARATOR | 11/30/1989 | 07/444,454 | 07/14/1992 | 5,130,578 |
| UNITED STATES | A RECEIVER AUTOMATIC GAIN CONTROL (AGC) | 02/14/1991 | 07/655,684 | 11/30/1993 | 5,267,272 |
| UNITED STATES | HIGH SPEED PROGRAMMABLE DIVIDER | 12/19/1988 | 07/286,435 | 12/04/1990 | 4,975,931 |
| UNITED STATES | EFFICIENT DIGITAL FREQUENCY DIVISION MULTIPLEXED SIGNAL RECEIVER | 01/05/1989 | 07/293,894 | 10/15/1991 | 5,058,107 |
| UNITED STATES | EFFICIENT DIGITAL FREQUENCY DIVISION MULTIPLEXED SIGNAL RECEIVER | 07/31/1991 | 07/739,593 | 10/05/1993 | 5,251,218 |
| UNITED STATES | LOW COST AGC FUNCTION FOR MULTIPLE APPROXIMATION A/D CONVERTERS | 06/27/1991 | 07/722,763 | 04/27/1993 | 5,206,647 |
| UNITED STATES | TWO QUADRANTS HIGH SPEED MULTIPLYING DAC | 03/28/1991 | 07/676,635 | 07/07/1992 | 5,128,674 |
| UNITED STATES | DISTORTION SUPPRESSION USING THRESHOLDING TECHNIQUES | 09/10/1990 | 07/580,710 | 12/14/1993 | 5,271,038 |
| UNITED STATES | DIVIDER SYNCHRONIZATION CIRCUIT FOR PHASE-LOCKED LOOP FREQUENCY SNYTHESIZER | 01/31/1992 | 07/829,183 | 04/19/1994 | 5,304,951 |
| UNITED STATES | DIGITAL EQUALIZATION METHOD AND APPARATUS | 01/22/1991 | 07/643,969 | 11/17/1992 | 5,164,959 |
| UNITED STATES | HIGH CHARGE CAPACITY FOCAL PLANE ARRAY READOUT CELL | 07/17/1990 | 07/554,238 | 07/07/1992 | 5,128,534 |
| UNITED STATES | TECHNOLOGY INDEPENDENT INTEGRATED CIRCUIT MASK ARTWORK GENERATOR | 12/10/1990 | 07/624,958 | 04/12/1994 | 5,303,161 |
| UNITED STATES | MICROELECTRONIC FIELD EMISSION DEVICE WITH AIR BRIDGE ANODE | 03/26/1991 | 07/675,590 | 08/04/1992 | 5,136,205 |
| UNITED STATES | SAMPLE AND HOLD CIRCUIT WITH PUSH-PULL OUTPUT CHARGING CURRENT | 07/06/1992 | 07/909,286 | 09/27/1994 | 5,350,952 |
| UNITED STATES | MULTIPLE USE DIGITAL TRANSMITTER/TRANSCEIVER WITH TIME MULTIPLEXING | 09/23/1991 | 07/765,157 | 06/15/1993 | 5,220,557 |

| Country | Title | Filing Date | Serial / Application No. | Issue Date | Patent No. |
|---|---|---|---|---|---|
| UNITED STATES | MULTIPLE USER DIGITAL RECEIVER APPARATUS AND METHOD WITH COMBINED MULTIPLE FREQUENCY CHANNELS | 06/29/1992 | 07/905,965 | 01/11/1994 | 5,278,837 |
| UNITED STATES | MULTIPLE USER DIGITAL RECEIVER APPARATUS AND METHOD WITH TIME DIVISION MULTIPLEXING | 12/07/1992 | 07/986,180 | 04/15/1997 | 5,621,730 |
| UNITED STATES | MULTIPLE USER DIGITAL RECEIVER APPARATUS AND METHOD WITH TIME DIVISION MULTIPLEXING | 12/12/1996 | 08/764,808 | 02/09/1999 | 5,870,402 |
| UNITED STATES | DIFFERENTIAL LOGIC LEVEL TRANSLATOR CIRCUIT WITH DUAL OUTPUT LOGIC LEVELS SELECTABLE BY POWER CONNECTOR OPTIONS | 09/30/1993 | 08/129,939 | 06/27/1995 | 5,428,305 |
| UNITED STATES | SAMPLE AND HOLD CIRCUIT WITH FULL SIGNAL MODULATION COMPENSATION USING BIPOLAR TRANSISTORS OF SINGLE CONDUCTIVITY TYPE | 04/17/1992 | 07/870,369 | 05/17/1994 | 5,313,113 |
| UNITED STATES | POWER-EFFICIENT SAMPLE AND HOLD CIRCUIT USING BIPOLAR TRANSISTORS OF SINGLE CONDUCTIVITY TYPE | 06/08/1992 | 07/894,980 | 05/24/1994 | 5,315,169 |
| UNITED STATES | SINGLE-ENDED AND DIFFERENTIAL TRANSISTOR AMPLIFIER CIRCUITS WITH FULL SIGNAL MODULATION COMPENSATION TECHNIQUES WHICH ARE TECHNOLOGY INDEPENDENT | 04/20/1992 | 07/871,861 | 10/05/1993 | 5,250,911 |
| UNITED STATES | SINGLE-ENDED AND DIFFERENTIAL TRANSISTOR AMPLIFIER CIRCUITS WITH FULL SIGNAL MODULATION COMPENSATION TECHNIQUES WHICH... | 06/21/1993 | 08/080,269 | 08/30/1994 | 5,343,163 |
| UNITED STATES | SYMMETRICAL BIPOLAR BIAS CURRENT SOURCE WITH HIGH POWER SUPPLY REJECTION RATIO (PSRR) | 11/16/1992 | 07/976,760 | 05/24/1994 | 5,315,231 |

| Country | Title | Filing Date | Serial / Application No. | Issue Date | Patent No. |
|---|---|---|---|---|---|
| UNITED STATES | SINGLE-ENDED AND DIFFERENTIAL AMPLIFIER WITH HIGH CURRENT FEEDBACK INPUT IMPEDANCE AND LOW DISTORTION | 03/17/1994 | 08/210,269 | 04/25/1995 | 5,410,274 |
| UNITED STATES | TRANSISTOR CURRENT SWITCH ARRAY FOR DIGITAL-TO-ANALOG CONVERTER (DAC) INCLUDING BIAS CURRENT COMPENSATION FOR ..... | 02/05/1993 | 08/017,200 | 01/09/1996 | 5,483,150 |
| UNITED STATES | INTERFERENCE CANCELLING RECEIVER | 04/30/1996 | 08/641,452 | 03/17/1998 | 5,729,576 |
| UNITED STATES | VARIABLE GAIN AMPLIFIER | 06/07/1995 | 08/479,284 | 12/03/1996 | 5,581,213 |
| UNITED STATES | TECHNIQUE TO DETECT ANGLE OF ARRIVAL WITH LOW AMBIGUITY | 05/18/1995 | 08/443,537 | 11/05/1996 | 5,572,220 |
| UNITED STATES | VEHICLE POSITION TRACKING TECHNIQUE | 05/18/1995 | 08/443,519 | 01/07/1997 | 5,592,181 |
| UNITED STATES | DIGITAL SYNTHESIZED WIDEBAND NOISE-LIKE WAVEFORM | 02/20/1996 | 08/603,673 | 12/08/1998 | 5,848,160 |
| UNITED STATES | ANALOG WAVEFORM COMMUNICATIONS REDUCED INSTRUCTION SET PROCESSOR | 05/22/1996 | 08/653,930 | 11/04/1997 | 5,684,435 |
| UNITED STATES | OVERDRIVE PROTECTION CLAMP SCHEME FOR FEEDBACK AMPLIFIERS | 11/07/1996 | 08/745,070 | 01/05/1999 | 5,856,760 |
| UNITED STATES | I.C. POWER SUPPLY TERMINAL PROTECTION CLAMP | 11/27/1996 | 08/753,647 | 06/30/1998 | 5,774,318 |
| UNITED STATES | DIFFERENTIAL PAIR GAIN CONTROL STAGE | 05/01/1997 | 08/848,930 | 03/21/2000 | 6,040,731 |
| UNITED STATES | LOW VOLTAGE ANALOG FRONT END | 04/11/1997 | 08/827,855 | 01/12/1999 | 5,859,558 |
| UNITED STATES | TEMPERATURE COMPENSATED AMPLIFIER | 04/11/1997 | 08/827,854 | 01/12/1999 | 5,859,568 |
| UNITED STATES | CURRENT FEEDBACK DIFFERENTIAL AMPLIFIER CLAMP | 04/14/1997 | 08/843,200 | 01/12/1999 | 5,859,569 |
| UNITED STATES | TEST CIRCUIT AND METHOD OF TRIMMING A UNARY DIGITAL-TO-ANALOG CONVERTER (DAC) IN A SUBRANGING ANALOG-TO-DIGITAL CONVERTER (ADC) | 01/20/1998 | 09/009,612 | 10/26/1999 | 5,973,631 |
| UNITED STATES | MIXER STRUCTURES WITH ENHANCED CONVERSION GAIN AND REDUCED SPURIOUS SIGNALS | 07/31/1997 | 08/903,657 | 01/12/1999 | 5,859,559 |

| Country | Title | Filing Date | Serial / Application No. | Issue Date | Patent No. |
|---|---|---|---|---|---|
| UNITED STATES | SELF-CALIBRATING, SELF-CORRECTING TRANSCEIVERS AND METHODS | 07/31/1997 | 08/903,807 | 09/12/2000 | 6,118,811 |
| UNITED STATES | MONOLITHIC CIRCUIT AND METHOD FOR ADDING A RANDOMIZED DITHER SIGNAL TO THE FINE QUANTIZER ELEMENT OF A SUBRANGING ANALOG-TO-DIGITAL CONVERTER (ADC) | 09/30/1997 | 08/941,457 | 11/23/1999 | 5,990,815 |
| UNITED STATES | COMMUNICATION SIGNAL PROCESSORS AND METHOD | 12/05/1996 | 08/761,103 | 09/28/1999 | 5,960,040 |
| UNITED STATES | RAPID TIME AND FREQUENCY ACQUISITION OF SPREAD SPECTRUM WAVEFORMS VIA AMBIGUITY TRANSFORM | 11/06/1997 | 08/965,251 | 11/30/1999 | 5,995,535 |
| UNITED STATES | SELF CALIBRATION CIRCUITRY AND ALGORITHM FOR MULTIPASS ANALOG-TO-DIGITAL CONVERTER INTERSTAGE GAIN CORRECTION | 12/08/1997 | 08/986,942 | 07/20/1999 | 5,926,123 |
| UNITED STATES | A MONOLITHIC CLASS AB SHUNT-SHUNT FEEDBACK CMOS LOW NOISE AMPLIFIER HAVING SELF BIAS | 02/20/1998 | 09/027,241 | 10/05/1999 | 5,963,094 |
| UNITED STATES | WIDEBAND IF IMAGE REJECTING RECEIVER | 12/23/1998( CPA filed 01/15/02) | 09/220,288 | | |
| UNITED STATES | HIGH SPEED PIN DRIVER INTEGRATED CIRCUIT ARCHITECTURE FOR COMMERCIAL AUTOMATIC TEST EQUIPMENT APPLICATIONS | 12/23/1999 | 09/219,759 | 12/05/2000 | 6,157,224 |
| UNITED STATES | A LOW NOISE, LOW DISTORTION RF AMPLIFIER TOPOLOGY | 02/22/2001 | 09/790,796 | | |
| UNITED STATES | UNIT CELL WITH FAN-OUT FOR LARGE FOCAL PLANE ARRAYS WITH SMALL DETECTOR PITCH | 05/18/2000 | 09/574,123 | | |
| UNITED STATES | LOW NOISE, LOW DISTORTION, COMPLEMENTARY IF AMPLIFIER | 06/30/2000 | 09/607,223 | | |

| Country | Title | Filing Date | Serial / Application No. | Issue Date | Patent No. |
|---|---|---|---|---|---|
| UNITED STATES | LOW NOISE, LOW DISTORTION, MUXABLE GILBERT MIXER SIGNAL PROCESSING SYSTEM AND METHOD WITH AGC FUNCTIONALITY | 05/26/2000 | 09/579,596 | | |
| UNITED STATES | ON-CHIP MULTI-LAYER METAL SHIELDED TRANSMISSION LINE | 11/02/2000 | 09/705,134 | | |
| UNITED STATES | HIGH RESOLUTION ADC BASED ON AN OVERSAMPLED SUBRANGING ADC | 11/01/2000 | 09/703,646 | | |
| UNITED STATES | MONOLITHIC PAYLOAD IF SWITCH | 09/29/1999 | 09/408,114 | | |

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PTO/SB/96 (08-00)
Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE


## STATEMENT UNDER 37 CFR 3.73(b)

Applicant/Patent Owner: TELASIC COMMUNICATIONS, INC.
Application No./Patent No.: See Attached Schedule A Filed/Issue Date: See Attached Schedule A
Entitled: See Attached Schedule A
TelASIC Communications, Inc., a corporation organized under the State of Delaware
(Name of Assignee) (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that it is:

1. ☒ the assignee of the entire right, title, and interest; or
2. ☐ an assignee of less than the entire right, title and interest.
The extent (by, percentage) of its ownership interest is _____%

in the patent applications and patent listed on the attached **Schedule A** by virtue of either:

A. ☒ An assignment from the owner(s) of the patent applications and patents identified on the attached Schedule A. A copy of the assignment or other documents in the chain of title are attached. A separate copy of this assignment is being submitted to the Assignment Division.

OR

B. ☐ A chain of title from the inventor(s), of the patent application(s)/patent(s) identified above, to the current assignee as shown below:

1. From:_____ To: _____
The document was recorded in the United States Patent and Trademark Office at
Reel_____, Frame_____, or for which a copy thereof is attached.
2. From:_____ To: _____
The document was recorded in the United States Patent and Trademark Office at
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3. From:_____ To: _____
The document was recorded in the United States Patent and Trademark Office at
Reel_____, Frame_____, or for which a copy thereof is attached.

[ ] Additional documents in the chain of title are listed on a supplemental sheet.

[NOTE: A separate copy (*i.e.*, the original assignment document or a true copy of the original document) must be submitted to Assignment Division in accordance with 37 CFR Part 3, if the assignment is to be recorded in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

7/15/2002
Date

Tony Giraudo
Typed or printed name

Signature

Chief Executive Officer
Title



Attorney Docket No.: *

la-584583

# CONFIRMATORY ASSIGNMENT

WHEREAS, **Raytheon Company**, a corporation organized and existing under the laws of the State of Delaware, U.S.A., with a place of business at 141 Spring Street, Lexington, MA 02421, U.S.A. (hereinafter "assignor"), is the sole and exclusive owner, by assignment, of the United States and foreign patents, patent applications, and inventions described in the attached Schedule A ("PATENTS");

WHEREAS, **TelASIC Communications, Inc.**, a corporation organized and existing under the laws of the State of Delaware, U.S.A., with a place of business at 1940 E. Mariposa Ave., El Segundo, CA. 90245, U.S.A. (hereinafter "assignee"), is desirous of acquiring the right, title and interest in, to and under said PATENTS; and

WHEREAS, assignor and assignee have entered into a certain Technology Assignment And License Agreement, dated April 25, 2001 assigning, among other things, all right, title and interest in and to the PATENTS from assignor to assignee;

NOW, THEREFORE, for valuable consideration received, the receipt of which is hereby acknowledged, assignor has sold, assigned, and transferred, and does hereby sell, assign, and transfer the entire right, title and interest in and to the above-mentioned PATENTS, and any and all Letters Patent in the United States of America and in all foreign countries that may be granted therefor and thereon, including reissues and extensions thereon, and in and to any and all divisions, continuations, and continuations-in-part of said PATENTS, the same to be held and enjoyed by the said assignee, for their own use and the use of their successors, legal representatives and assigns, to the full end of the term or terms for which the Letters Patent may be granted, as fully and entirely as the same would have been held and enjoyed by the assignor had this sale and assignment not been made;

AND assignor hereby authorizes and requests the Commissioner of Patents and Trademarks to issue any and all Letters Patent of the United States on said inventions or resulting from said applications and any continuations, divisionals and reissues thereof to assignee as assignee of the entire interest, and hereby covenants that it has full right to convey the entire interest herein assigned, and that it has not executed, and will not execute, any agreements inconsistent herewith.

(Signatures on next page)

RAYTHEON COMPANY

July 2, 2002
Date

Name Glenn H. Lenzen, Jr.
Title Vice President
Intellectual Property & Licensing

WITNESSES:

(Name and Address) Leonard A. Alkov
P.O. Box 902, EO/E01/E150
2000 E. El Segundo Boulevard
El Segundo, CA 90245-0902

(Name and Address) Colin M. Raufer
P.O. Box 902, EO/E01/E150
2000 E. El Segundo Boulevard
El Segundo, CA 90245-0902

TelASIC Telecommunications, Inc.

July 3, 2002
Date

Name: Tony Giraudo
Title: CEO

Title:

WITNESSES:

(Name and Address)
Lou Entin 1940 E. Mariposa Ave., El Segundo CA., 90245

(Name and Address)
Leonard A. Alkov
P.O. Box 902, EO/E01/E150
2000 E. El Segundo Blvd.
El Segundo, CA. 90245

SCHEDULE A

COPY OF PAPERS ORIGINALLY FILED

| Country | Title | Filing Date | Serial / Application No. | Issue Date | Patent No. |
|---|---|---|---|---|---|
| UNITED STATES | WIDEBAND FAST-HOPPING RECEIVER FRONT-END AND MIXING METHOD | 09/18/2000 | 09/664,298 | | |
| TAIWAN | WIDEBAND FAST-HOPPING RECEIVER FRONT-END AND MIXING METHOD | 09/19/2001 | 90124225 | | |
| PATENT COOPERATION TREATY | WIDEBAND FAST-HOPPING RECEIVER FRONT-END AND MIXING METHOD | 09/07/2001 | PCTUS01/27646 | | |
| UNITED STATES | HIGH-SPEED DIGITAL DATA COMMUNICATION SYSTEM | 08/25/1987 | 07/089,281 | 07/10/1990 | 4,941,153 |
| UNITED STATES | EFFICIENT HIGH SPEED N-WORD COMPARATOR | 11/30/1989 | 07/444,454 | 07/14/1992 | 5,130,578 |
| ISRAEL | AN AUTOMATIC GAIN CONTROL TECHNIQUE FOR FREQUENCY HOPPING RECEIVER | 10/17/1989 | 092021 | 09/25/1994 | 92021 |
| UNITED STATES | A RECEIVER AUTOMATIC GAIN CONTROL (AGC) | 02/14/1991 | 07/655,684 | 11/30/1993 | 5,267,272 |
| FRANCE | AN AUTOMATIC GAIN CONTROL TECHNIQUE FOR FREQUENCY HOPPING RECEIVER | 10/21/1989 | | 07/20/1994 | 0366025 |
| GREAT BRITAIN | AN AUTOMATIC GAIN CONTROL TECHNIQUE FOR FREQUENCY HOPPING RECEIVER | 10/21/1989 | | 07/20/1994 | 0366025 |
| GERMANY | AN AUTOMATIC GAIN CONTROL TECHNIQUE FOR FREQUENCY HOPPING RECEIVER | 10/21/1989 | P68916899.3-08 | 07/20/1994 | 0366025 |
| UNITED STATES | HIGH SPEED PROGRAMMABLE DIVIDER | 12/19/1988 | 07/286,435 | 12/04/1990 | 4,975,931 |
| ISRAEL | HIGH SPEED PROGRAMMABLE DIVIDER | 12/18/1989 | 092769 | 05/23/1993 | 92769 |
| NORWAY | HIGH SPEED PROGRAMMABLE DIVIDER | 11/14/1989 | 1990-3620 | 06/22/1998 | 303308 |
| JAPAN | HIGH SPEED PROGRAMMABLE DIVIDER | 11/14/1989 | 2-500380 | 11/07/1996 | 2577134 |
| CANADA | HIGH SPEED PROGRAMMABLE DIVIDER | 11/21/1989 | 2003466-1 | 01/31/1995 | 2003466 |
| AUSTRALIA | HIGH SPEED PROGRAMMABLE DIVIDER | 11/14/1989 | 46538/89 | 04/13/1992 | 618434 |
| EGYPT | HIGH SPEED PROGRAMMABLE DIVIDER | 02/19/1990 | 95/90 | 10/31/1994 | 19076 |
| FRANCE | HIGH SPEED PROGRAMMABLE DIVIDER | 11/14/1989 | | 06/01/1994 | 0406366 |
| SWEDEN | HIGH SPEED PROGRAMMABLE DIVIDER | 11/14/1989 | | 06/01/1994 | 0406366 |
| NETHERLANDS | HIGH SPEED PROGRAMMABLE DIVIDER | 11/14/1989 | | 06/01/1994 | 0406366 |
| GREAT BRITAIN | HIGH SPEED PROGRAMMABLE DIVIDER | 11/14/1989 | | 06/01/1994 | 0406366 |

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| GERMANY | HIGH SPEED PROGRAMMABLE DIVIDER | 11/14/1989 | P68915756.8-08 | 06/01/1994 | 0406366 |
| UNITED STATES | EFFICIENT DIGITAL FREQUENCY DIVISION MULTIPLEXED SIGNAL RECEIVER | 01/05/1989 | 07/293,894 | 10/15/1991 | 5,058,107 |
| ISRAEL | EFFICIENT DIGITAL FREQUENCY DIVISION MULTIPLEXED SIGNAL RECEIVER | 12/25/1989 | 092883 | 05/29/1994 | 92883 |
| CANADA | EFFICIENT DIGITAL FREQUENCY DIVISION MULTIPLEXED SIGNAL RECEIVER | 12/07/1989 | 2004860-3 | 03/15/1994 | 2004860 |
| AUSTRALIA | EFFICIENT DIGITAL FREQUENCY DIVISION MULTIPLEXED SIGNAL RECEIVER | 01/03/1990 | 47632/90 | 05/16/1991 | 606007 |
| SOUTH KOREA | EFFICIENT DIGITAL FREQUENCY DIVISION MULTIPLEXED SIGNAL RECEIVER | 01/04/1990 | 90-18 | 10/25/1993 | 66884 |
| UNITED STATES | EFFICIENT DIGITAL FREQUENCY DIVISION MULTIPLEXED SIGNAL RECEIVER | 07/31/1991 | 07/739,593 | 10/05/1993 | 5,251,218 |
| ITALY | EFFICIENT DIGITAL FREQUENCY DIVISION MULTIPLEXED SIGNAL RECEIVER | 01/04/1990 | | 09/11/1996 | 0377509 |
| SPAIN | EFFICIENT DIGITAL FREQUENCY DIVISION MULTIPLEXED SIGNAL RECEIVER | 01/04/1990 | | 09/11/1996 | 0377509 |
| FRANCE | EFFICIENT DIGITAL FREQUENCY DIVISION MULTIPLEXED SIGNAL RECEIVER | 01/04/1990 | | 09/11/1996 | 0377509 |
| SWEDEN | EFFICIENT DIGITAL FREQUENCY DIVISION MULTIPLEXED SIGNAL RECEIVER | 01/04/1990 | | 09/11/1996 | 0377509 |
| SWITZERLAND | EFFICIENT DIGITAL FREQUENCY DIVISION MULTIPLEXED SIGNAL RECEIVER | 01/04/1990 | | 09/11/1996 | 0377509 |
| GREAT BRITAIN | EFFICIENT DIGITAL FREQUENCY DIVISION MULTIPLEXED SIGNAL RECEIVER | 01/04/1990 | | 09/11/1996 | 0377509 |

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| GERMANY | EFFICIENT DIGITAL FREQUENCY DIVISION MULTIPLEXED SIGNAL RECEIVER | 01/04/1990 | P69028413.0-08 | 09/11/1996 | 0377509 |
| UNITED STATES | LOW COST AGC FUNCTION FOR MULTIPLE APPROXIMATION A/D CONVERTERS | 06/27/1991 | 07/722,763 | 04/27/1993 | 5,206,647 |
| UNITED STATES | TWO QUADRANTS HIGH SPEED MULTIPLYING DAC | 03/28/1991 | 07/676,635 | 07/07/1992 | 5,128,674 |
| UNITED STATES | DISTORTION SUPPRESSION USING THRESHOLDING TECHNIQUES | 09/10/1990 | 07/580,710 | 12/14/1993 | 5,271,038 |
| UNITED STATES | DIVIDER SYNCHRONIZATION CIRCUIT FOR PHASE-LOCKED LOOP FREQUENCY SNYTHESIZER | 01/31/1992 | 07/829,183 | 04/19/1994 | 5,304,951 |
| ISRAEL | DIVIDER SYNCHRONIZATION CIRCUIT FOR PHASE-LOCKED LOOP FREQUENCY SNYTHESIZER | 12/18/1992 | 104176 | 02/01/1996 | 104176 |
| JAPAN | DIVIDER SYNCHRONIZATION CIRCUIT FOR PHASE-LOCKED LOOP FREQUENCY SNYTHESIZER | 02/01/1993 | 14971/93 | 01/16/1998 | 2738488 |
| NORWAY | DIVIDER SYNCHRONIZATION CIRCUIT FOR PHASE-LOCKED LOOP FREQUENCY SNYTHESIZER | 01/12/1993 | 1993-0097 | 06/19/2000 | 307948 |
| CANADA | DIVIDER SYNCHRONIZATION CIRCUIT FOR PHASE-LOCKED LOOP FREQUENCY SNYTHESIZER | 12/01/1992 | 2084284-9 | 12/29/1998 | 2084284 |
| ITALY | DIVIDER SYNCHRONIZATION CIRCUIT FOR PHASE-LOCKED LOOP FREQUENCY SNYTHESIZER | 01/25/1993 | | 04/01/1998 | 0553748 |
| SWEDEN | DIVIDER SYNCHRONIZATION CIRCUIT FOR PHASE-LOCKED LOOP FREQUENCY SNYTHESIZER | 01/25/1993 | | 04/01/1998 | 0553748 |
| NETHERLANDS | DIVIDER SYNCHRONIZATION CIRCUIT FOR PHASE-LOCKED LOOP FREQUENCY SNYTHESIZER | 01/25/1993 | | 04/01/1998 | 0553748 |
| SWITZERLAND | DIVIDER SYNCHRONIZATION CIRCUIT FOR PHASE-LOCKED LOOP FREQUENCY SNYTHESIZER | 01/25/1993 | | 04/01/1998 | 0553748 |
| GREAT BRITAIN | DIVIDER SYNCHRONIZATION CIRCUIT FOR PHASE-LOCKED LOOP FREQUENCY SNYTHESIZER | 01/25/1993 | | 04/01/1998 | 0553748 |

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| FRANCE | DIVIDER SYNCHRONIZATION CIRCUIT FOR PHASE-LOCKED LOOP FREQUENCY SNYTHESIZER | 01/25/1993 | | 04/01/1998 | 0553748 |
| GERMANY | DIVIDER SYNCHRONIZATION CIRCUIT FOR PHASE-LOCKED LOOP FREQUENCY SNYTHESIZER | 01/25/1993 | 69317685.7-08 | 04/01/1998 | 0553748 |
| SPAIN | DIVIDER SYNCHRONIZATION CIRCUIT FOR PHASE-LOCKED LOOP FREQUENCY SNYTHESIZER | 01/25/1993 | ES2114961T3 | 04/01/1998 | 0553748 |
| UNITED STATES | DIGITAL EQUALIZATION METHOD AND APPARATUS | 01/22/1991 | 07/643,969 | 11/17/1992 | 5,164,959 |
| UNITED STATES | HIGH CHARGE CAPACITY FOCAL PLANE ARRAY READOUT CELL | 07/17/1990 | 07/554,238 | 07/07/1992 | 5,128,534 |
| UNITED STATES | TECHNOLOGY INDEPENDENT INTEGRATED CIRCUIT MASK ARTWORK GENERATOR | 12/10/1990 | 07/624,958 | 04/12/1994 | 5,303,161 |
| UNITED STATES | MICROELECTRONIC FIELD EMISSION DEVICE WITH AIR BRIDGE ANODE | 03/26/1991 | 07/675,590 | 08/04/1992 | 5,136,205 |
| UNITED STATES | SAMPLE AND HOLD CIRCUIT WITH PUSH-PULL OUTPUT CHARGING CURRENT | 07/06/1992 | 07/909,286 | 09/27/1994 | 5,350,952 |
| UNITED STATES | MULTIPLE USE DIGITAL TRANSMITTER/TRANSCEIVER WITH TIME MULTIPLEXING | 09/23/1991 | 07/765,157 | 06/15/1993 | 5,220,557 |
| JAPAN | MULTIPLE USE DIGITAL TRANSMITTER/TRANSCEIVER WITH TIME MULTIPLEXING | 09/24/1992 | 4-255109 | 01/13/1997 | 2125739 |
| FRANCE | MULTIPLE USE DIGITAL TRANSMITTER/TRANSCEIVER WITH TIME MULTIPLEXING | 09/12/1992 | | 01/27/1999 | 0534255 |
| GREAT BRITAIN | MULTIPLE USE DIGITAL TRANSMITTER/TRANSCEIVER WITH TIME MULTIPLEXING | 01/23/9299 | | 01/27/1999 | 0534255 |
| NETHERLANDS | MULTIPLE USE DIGITAL TRANSMITTER/TRANSCEIVER WITH TIME MULTIPLEXING | 09/12/1992 | | 01/27/1999 | 0534255 |
| GERMANY | MULTIPLE USE DIGITAL TRANSMITTER/TRANSCEIVER WITH TIME MULTIPLEXING | 09/12/1992 | 69228281.5-08 | 01/27/1999 | 0534255 |
| CANADA | MULTIPLE USER DIGITAL RECEIVER APPARATUS AND METHOD WITH COMBINED MULTIPLE FREQUENCY CHANNELS | 04/21/1992 | 2066851-2 | 08/06/1996 | 2066851 |

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| GREAT BRITAIN | MULTIPLE USER DIGITAL RECEIVER APPARATUS AND METHOD WITH COMBINED MULTIPLE FREQUENCY CHANNELS | 05/29/1992 | 9211449.5 | 05/17/1995 | 2258104 |
| GERMANY | MULTIPLE USER DIGITAL RECEIVER APPARATUS AND METHOD WITH COMBINED MULTIPLE FREQUENCY CHANNELS | 06/12/1992 | P4219357.5 | 11/18/1993 | 4219357 |
| UNITED STATES | MULTIPLE USER DIGITAL RECEIVER APPARATUS AND METHOD WITH COMBINED MULTIPLE FREQUENCY CHANNELS | 06/29/1992 | 07/905,965 | 01/11/1994 | 5,278,837 |
| JAPAN | MULTIPLE USER DIGITAL RECEIVING APPARATUS AND METHOD WITH TIME DIVISION MULTIPLEXING | 06/15/1992 | 155350/92 | 09/25/1998 | 2831512 |
| CANADA | MULTIPLE USER DIGITAL RECEIVING APPARATUS AND METHOD WITH TIME DIVISION MULTIPLEXING | 04/21/1992 | 2066540-8 | 01/20/1998 | 2066540 |
| GREAT BRITAIN | MULTIPLE USER DIGITAL RECEIVING APPARATUS AND METHOD WITH TIME DIVISION MULTIPLEXING | 05/29/1992 | 9211350.5 | 05/17/1995 | 2258103 |
| GERMANY | MULTIPLE USER DIGITAL RECEIVING APPARATUS AND METHOD WITH TIME DIVISION MULTIPLEXING | 06/12/1992 | P4219308.7 | 11/16/1995 | P4219308 |
| UNITED STATES | MULTIPLE USER DIGITAL RECEIVER APPARATUS AND METHOD WITH TIME DIVISION MULTIPLEXING | 12/07/1992 | 07/986,180 | 04/15/1997 | 5,621,730 |
| UNITED STATES | MULTIPLE USER DIGITAL RECEIVER APPARATUS AND METHOD WITH TIME DIVISION MULTIPLEXING | 12/12/1996 | 08/764,808 | 02/09/1999 | 5,870,402 |
| UNITED STATES | DIFFERENTIAL LOGIC LEVEL TRANSLATOR CIRCUIT WITH DUAL OUTPUT LOGIC LEVELS SELECTABLE BY POWER CONNECTOR OPTIONS | 09/30/1993 | 08/129,939 | 06/27/1995 | 5,428,305 |
| UNITED STATES | SAMPLE AND HOLD CIRCUIT WITH FULL SIGNAL MODULATION COMPENSATION USING BIPOLAR TRANSISTORS OF SINGLE CONDUCTIVITY TYPE | 04/17/1992 | 07/870,369 | 05/17/1994 | 5,313,113 |

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| JAPAN | SAMPLE AND HOLD CIRCUIT WITH FULL SIGNAL MODULATION COMPENSATION USING BIPOLAR TRANSISTORS OF SINGLE CONDUCTIVITY TYPE | 04/19/1993 | 91629/93 | | |
| FRANCE | SAMPLE AND HOLD CIRCUIT WITH FULL SIGNAL MODULATION COMPENSATION USING BIPOLAR TRANSISTORS OF SINGLE CONDUCTIVITY TYPE | 04/08/1993 | | 06/03/1998 | 0566334 |
| GREAT BRITAIN | SAMPLE AND HOLD CIRCUIT WITH FULL SIGNAL MODULATION COMPENSATION USING BIPOLAR TRANSISTORS OF SINGLE CONDUCTIVITY TYPE | 04/08/1993 | | 06/03/1998 | 0566334 |
| GERMANY | SAMPLE AND HOLD CIRCUIT WITH FULL SIGNAL MODULATION COMPENSATION USING BIPOLAR TRANSISTORS OF SINGLE CONDUCTIVITY TYPE | 04/08/1993 | 69318884.7-08 | 06/03/1998 | 0566334 |
| UNITED STATES | POWER-EFFICIENT SAMPLE AND HOLD CIRCUIT USING BIPOLAR TRANSISTORS OF SINGLE CONDUCTIVITY TYPE | 06/08/1992 | 07/894,980 | 05/24/1994 | 5,315,169 |
| UNITED STATES | SINGLE-ENDED AND DIFFERENTIAL TRANSISTOR AMPLIFIER CIRCUITS WITH FULL SIGNAL MODULATION COMPENSATION TECHNIQUES WHICH ARE TECHNOLOGY INDEPENDENT | 04/20/1992 | 07/871,861 | 10/05/1993 | 5,250,911 |
| EUROPEAN PATENT CONV | SINGLE-ENDED AND DIFFERENTIAL TRANSISTOR AMPLIFIER CIRCUITS WITH FULL SIGNAL MODULATION COMPENSATION TECHNIQUES WHICH ARE TECHNOLOGY INDEPENDENT | 04/15/1993 | 93106145.1 | | |

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| JAPAN | SINGLE-ENDED AND DIFFERENTIAL TRANSISTOR AMPLIFIER CIRCUITS WITH FULL SIGNAL MODULATION COMPENSATION TECHNIQUES WHICH ARE TECHNOLOGY INDEPENDENT | 04/20/1993 | 93365/93 | | |
| UNITED STATES | SINGLE-ENDED AND DIFFERENTIAL TRANSISTOR AMPLIFIER CIRCUITS WITH FULL SIGNAL MODULATION COMPENSATION TECHNIQUES WHICH... | 06/21/1993 | 08/080,269 | 08/30/1994 | 5,343,163 |
| UNITED STATES | SYMMETRICAL BIPOLAR BIAS CURRENT SOURCE WITH HIGH POWER SUPPLY REJECTION RATIO (PSRR) | 11/16/1992 | 07/976,760 | 05/24/1994 | 5,315,231 |
| JAPAN | SYMMETRICAL BIPOLAR BIAS CURRENT SOURCE WITH HIGH POWER SUPPLY REJECTION RATIO (PSRR) | 11/16/1993 | 287026/93 | | |
| UNITED STATES | SINGLE-ENDED AND DIFFERENTIAL AMPLIFIER WITH HIGH CURRENT FEEDBACK INPUT IMPEDANCE AND LOW DISTORTION | 03/17/1994 | 08/210,269 | 04/25/1995 | 5,410,274 |
| UNITED STATES | TRANSISTOR CURRENT SWITCH ARRAY FOR DIGITAL-TO-ANALOG CONVERTER (DAC) INCLUDING BIAS CURRENT COMPENSATION FOR ..... | 02/05/1993 | 08/017,200 | 01/09/1996 | 5,483,150 |
| UNITED STATES | INTERFERENCE CANCELLING RECEIVER | 04/30/1996 | 08/641,452 | 03/17/1998 | 5,729,576 |
| UNITED STATES | VARIABLE GAIN AMPLIFIER | 06/07/1995 | 08/479,284 | 12/03/1996 | 5,581,213 |
| UNITED STATES | TECHNIQUE TO DETECT ANGLE OF ARRIVAL WITH LOW AMBIGUITY | 05/18/1995 | 08/443,537 | 11/05/1996 | 5,572,220 |
| UNITED STATES | VEHICLE POSITION TRACKING TECHNIQUE | 05/18/1995 | 08/443,519 | 01/07/1997 | 5,592,181 |
| ISRAEL | VEHICLE POSITION TRACKING TECHNIQUE | 09/29/1996 | 119327 | | 119327 |
| CANADA | VEHICLE POSITION TRACKING TECHNIQUE | 09/27/1996 | 2186674 | 08/24/1999 | 2186674 |
| JAPAN | VEHICLE POSITION TRACKING TECHNIQUE | 10/01/1996 | 260550/96 | 04/23/1999 | 2918853 |
| NEW ZEALAND | VEHICLE POSITION TRACKING TECHNIQUE | 09/30/1996 | 299477 | 11/18/1998 | 299477 |
| SOUTH KOREA | VEHICLE POSITION TRACKING TECHNIQUE | 10/01/1996 | 43577/1996 | 04/30/1999 | 211270 |

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| AUSTRALIA | VEHICLE POSITION TRACKING TECHNIQUE | 09/30/1996 | 67918/96 | 03/12/1998 | 683802 |
| TAIWAN | VEHICLE POSITION TRACKING TECHNIQUE | 10/22/1996 | 85112960 | 11/11/1998 | 99220 |
| MEXICO | VEHICLE POSITION TRACKING TECHNIQUE | 09/30/1996 | 964449 | | |
| NORWAY | VEHICLE POSITION TRACKING TECHNIQUE | 09/30/1996 | P964144 | | |
| BRAZIL | VEHICLE POSITION TRACKING TECHNIQUE | 10/01/1996 | PI9603967-1 | | |
| UNITED STATES | DIGITAL SYNTHESIZED WIDEBAND NOISE-LIKE WAVEFORM | 02/20/1996 | 08/603,673 | 12/08/1998 | 5,848,160 |
| UNITED STATES | ANALOG WAVEFORM COMMUNICATIONS REDUCED INSTRUCTION SET PROCESSOR | 05/22/1996 | 08/653,930 | 11/04/1997 | 5,684,435 |
| JAPAN | ANALOG WAVEFORM COMMUNICATIONS REDUCED INSTRUCTION SET PROCESSOR | 05/22/1997 | 132619/97 | 12/14/2001 | 3261068 |
| EUROPEAN PATENT CONV | ANALOG WAVEFORM COMMUNICATIONS REDUCED INSTRUCTION SET PROCESSOR | 05/22/1997 | 97108301.9 | | |
| UNITED STATES | OVERDRIVE PROTECTION CLAMP SCHEME FOR FEEDBACK AMPLIFIERS | 11/07/1996 | 08/745,070 | 01/05/1999 | 5,856,760 |
| UNITED STATES | I.C. POWER SUPPLY TERMINAL PROTECTION CLAMP | 11/27/1996 | 08/753,647 | 06/30/1998 | 5,774,318 |
| EUROPEAN PATENT CONV | I.C. POWER SUPPLY TERMINAL PROTECTION CLAMP | 11/26/1997 | 97309509.4 | | |
| UNITED STATES | DIFFERENTIAL PAIR GAIN CONTROL STAGE | 05/01/1997 | 08/848,930 | 03/21/2000 | 6,040,731 |
| JAPAN | DIFFERENTIAL PAIR GAIN CONTROL STAGE | 04/30/1998 | 547383/98 | | |
| EUROPEAN PATENT CONV | DIFFERENTIAL PAIR GAIN CONTROL STAGE | 04/30/1998 | 98920924.2 | | |
| UNITED STATES | LOW VOLTAGE ANALOG FRONT END | 04/11/1997 | 08/827,855 | 01/12/1999 | 5,859,558 |
| JAPAN | LOW VOLTAGE ANALOG FRONT END | 04/09/1998 | 544172/98 | 12/21/2001 | 3263089 |
| EUROPEAN PATENT CONV | LOW VOLTAGE ANALOG FRONT END | 04/09/1998 | 98915531.2 | | |
| UNITED STATES | TEMPERATURE COMPENSATED AMPLIFIER | 04/11/1997 | 08/827,854 | 01/12/1999 | 5,859,568 |
| JAPAN | TEMPERATURE COMPENSATED AMPLIFIER | 04/09/1998 | 544036/98 | 10/19/2001 | 3242932 |
| EUROPEAN PATENT CONV | TEMPERATURE COMPENSATED AMPLIFIER | 04/09/1998 | 98918064.1 | | |

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| UNITED STATES | CURRENT FEEDBACK DIFFERENTIAL AMPLIFIER CLAMP | 04/14/1997 | 08/843,200 | 01/12/1999 | 5,859,569 |
| JAPAN | CURRENT FEEDBACK DIFFERENTIAL AMPLIFIER CLAMP | 04/09/1998 | 544028/98 | 12/07/2001 | 03258339 |
| EUROPEAN PATENT CONV | CURRENT FEEDBACK DIFFERENTIAL AMPLIFIER CLAMP | 04/09/1998 | 98918059.1 | | |
| UNITED STATES | TEST CIRCUIT AND METHOD OF TRIMMING A UNARY DIGITAL-TO-ANALOG CONVERTER (DAC) IN A SUBRANGING ANALOG-TO-DIGITAL CONVERTER (ADC) | 01/20/1998 | 09/009,612 | 10/26/1999 | 5,973,631 |
| UNITED STATES | MIXER STRUCTURES WITH ENHANCED CONVERSION GAIN AND REDUCED SPURIOUS SIGNALS | 07/31/1997 | 08/903,657 | 01/12/1999 | 5,859,559 |
| UNITED STATES | SELF-CALIBRATING, SELF-CORRECTING TRANSCEIVERS AND METHODS | 07/31/1997 | 08/903,807 | 09/12/2000 | 6,118,811 |
| UNITED STATES | MONOLITHIC CIRCUIT AND METHOD FOR ADDING A RANDOMIZED DITHER SIGNAL TO THE FINE QUANTIZER ELEMENT OF A SUBRANGING ANALOG-TO-DIGITAL CONVERTER (ADC) | 09/30/1997 | 08/941,457 | 11/23/1999 | 5,990,815 |
| UNITED STATES | COMMUNICATION SIGNAL PROCESSORS AND METHOD | 12/05/1996 | 08/761,103 | 09/28/1999 | 5,960,040 |
| JAPAN | COMMUNICATION SIGNAL PROCESSORS AND METHOD | 12/05/1997 | 336138/97 | 09/08/2000 | 3108051 |
| EUROPEAN PATENT CONV | COMMUNICATION SIGNAL PROCESSORS AND METHOD | 11/29/1997 | 97151019.0 | | |
| UNITED STATES | RAPID TIME AND FREQUENCY ACQUISITION OF SPREAD SPECTRUM WAVEFORMS VIA AMBIGUITY TRANSFORM | 11/06/1997 | 08/965,251 | 11/30/1999 | 5,995,535 |
| UNITED STATES | SELF CALIBRATION CIRCUITRY AND ALGORITHM FOR MULTIPASS ANALOG-TO-DIGITAL CONVERTER INTERSTAGE GAIN CORRECTION | 12/08/1997 | 08/986,942 | 07/20/1999 | 5,926,123 |

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| UNITED STATES | A MONOLITHIC CLASS AB SHUNT-SHUNT FEEDBACK CMOS LOW NOISE AMPLIFIER HAVING SELF BIAS | 02/20/1998 | 09/027,241 | 10/05/1999 | 5,963,094 |
| UNITED STATES | WIDEBAND IF IMAGE REJECTING RECEIVER | 12/23/1998( CPA filed 01/15/02) | 09/220,288 | | |
| JAPAN | WIDEBAND IF IMAGE REJECTING RECEIVER | 12/15/1999 | 2000-591718 | | |
| EUROPEAN PATENT CONV | WIDEBAND IF IMAGE REJECTING RECEIVER | 12/15/1999 | 99963089.0 | | |
| UNITED STATES | HIGH SPEED PIN DRIVER INTEGRATED CIRCUIT ARCHITECTURE FOR COMMERCIAL AUTOMATIC TEST EQUIPMENT APPLICATIONS | 12/23/1999 | 09/219,759 | 12/05/2000 | 6,157,224 |
| JAPAN | HIGH SPEED PIN DRIVER INTEGRATED CIRCUIT ARCHITECTURE FOR COMMERCIAL AUTOMATIC TEST EQUIPMENT APPLICATIONS | 12/16/1999 | 2000-591727 | | |
| EUROPEAN PATENT CONV | HIGH SPEED PIN DRIVER INTEGRATED CIRCUIT ARCHITECTURE FOR COMMERCIAL AUTOMATIC TEST EQUIPMENT APPLICATIONS | 12/16/1999 | 99967393.2 | | |
| UNITED STATES | A LOW NOISE, LOW DISTORTION RF AMPLIFIER TOPOLOGY | 02/22/2001 | 09/790,796 | | |
| EUROPEAN PATENT CONV | UNIT CELL WITH FAN-OUT FOR LARGE FOCAL PLANE ARRAYS WITH SMALL DETECTOR PITCH | 05/18/2001 | 01939165.5 | | |
| UNITED STATES | UNIT CELL WITH FAN-OUT FOR LARGE FOCAL PLANE ARRAYS WITH SMALL DETECTOR PITCH | 05/18/2000 | 09/574,123 | | |
| ISRAEL | UNIT CELL WITH FAN-OUT FOR LARGE FOCAL PLANE ARRAYS WITH SMALL DETECTOR PITCH | 05/18/2001 | 147,420 | | |
| JAPAN | UNIT CELL WITH FAN-OUT FOR LARGE FOCAL PLANE ARRAYS WITH SMALL DETECTOR PITCH | 05/18/2001 | 2001-584489 | | |
| PATENT COOPERATION TREATY | UNIT CELL WITH FAN-OUT FOR LARGE FOCAL PLANE ARRAYS WITH SMALL DETECTOR PITCH | 05/18/2001 | PCT/US01/16263 | | |

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| EUROPEAN PATENT CONV | LOW NOISE, LOW DISTORTION, COMPLEMENTARY IF AMPLIFIER | | | | |
| UNITED STATES | LOW NOISE, LOW DISTORTION, COMPLEMENTARY IF AMPLIFIER | 06/30/2000 | 09/607,223 | | |
| JAPAN | LOW NOISE, LOW DISTORTION, COMPLEMENTARY IF AMPLIFIER | 06/28/2001 | 2002-514877 | | |
| PATENT COOPERATION TREATY | LOW NOISE, LOW DISTORTION, COMPLEMENTARY IF AMPLIFIER | 06/28/2001 | PCT/US01/20628 | | |
| EUROPEAN PATENT CONV | LOW NOISE, LOW DISTORTION, MUXABLE GILBERT MIXER SIGNAL PROCESSING SYSTEM AND METHOD WITH AGC FUNCTIONALITY | 05/24/2001 | 01937763.9 | | |
| UNITED STATES | LOW NOISE, LOW DISTORTION, MUXABLE GILBERT MIXER SIGNAL PROCESSING SYSTEM AND METHOD WITH AGC FUNCTIONALITY | 05/26/2000 | 09/579,596 | | |
| SOUTH KOREA | LOW NOISE, LOW DISTORTION, MUXABLE GILBERT MIXER SIGNAL PROCESSING SYSTEM AND METHOD WITH AGC FUNCTIONALITY | 05/24/2001 | 102002-7000518 | | |
| JAPAN | LOW NOISE, LOW DISTORTION, MUXABLE GILBERT MIXER SIGNAL PROCESSING SYSTEM AND METHOD WITH AGC FUNCTIONALITY | 05/24/2001 | 2002-500529 | | |
| TAIWAN | LOW NOISE, LOW DISTORTION, MUXABLE GILBERT MIXER SIGNAL PROCESSING SYSTEM AND METHOD WITH AGC FUNCTIONALITY | 05/25/2001 | 90112834 | | |
| UNITED STATES | ON-CHIP MULTI-LAYER METAL SHIELDED TRANSMISSION LINE | 11/02/2000 | 09/705,134 | | |
| TAIWAN | ON-CHIP MULTI-LAYER METAL SHIELDED TRANSMISSION LINE | 11/01/2001 | 90127370 | | |

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| PATENT COOPERATION TREATY | ON-CHIP MULTI-LAYER METAL SHIELDED TRANSMISSION LINE | 11/01/2001 | PCT/US01/45725 | | |
| UNITED STATES | HIGH RESOLUTION ADC BASED ON AN OVERSAMPLED SUBRANGING ADC | 11/01/2000 | 09/703,646 | | |
| TAIWAN | HIGH RESOLUTION ADC BASED ON AN OVERSAMPLED SUBRANGING ADC | 10/31/2001 | 90127110 | | |
| PATENT COOPERATION TREATY | HIGH RESOLUTION ADC BASED ON AN OVERSAMPLED SUBRANGING ADC | 10/15/2001 | PCT/US01/32617 | | |
| MEXICO | MONOLITHIC PAYLOAD IF SWITCH | 09/29/2000 | 003189 | | |
| EUROPEAN PATENT CONV | MONOLITHIC PAYLOAD IF SWITCH | 09/29/2000 | 00967165.2 | | |
| UNITED STATES | MONOLITHIC PAYLOAD IF SWITCH | 09/29/1999 | 09/408,114 | | |
| SOUTH KOREA | MONOLITHIC PAYLOAD IF SWITCH | 09/29/2000 | 102001-7003986 | | |
| JAPAN | MONOLITHIC PAYLOAD IF SWITCH | 09/29/2000 | 2001-527575 | | |
| TAIWAN | MONOLITHIC PAYLOAD IF SWITCH | 09/29/2000 | 89120425 | | |